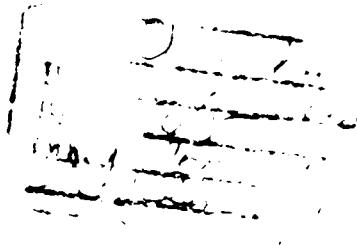




S00023020  
SUPERFUND RECORDS



JAN 14 1988

John C. Wright  
Ladd Hill  
DOE Denver  
Denver, Colorado 80222

Dear Mr. Wright:

Enclosed are the U.S. Environmental Protection Agency's (EPA) comments on sections 1-8 of the draft Ground Water and Surface Water Quality and Feasibility Study Report (November 24, 1987) for the site located at the Mancosite County site. The report has been reviewed by the Colorado State Department of Health and Environment, the U.S. Army Corps of Engineers, and the U.S. Bureau of Land Management.

The enclosed comments should be incorporated in the final draft report. Ladd Hill should provide written responses to those comments which were handled. Ladd Hill disagreed with a comment from the Bureau of Land Management. If Ladd Hill agreed and incorporated the comment into the report, it should be noted. Ladd Hill should provide all responses from EPA and the Corps of Engineers provided with the enclosed comments. The responses will be included in the report with the final draft report.

Sincerely yours,

Alice C. Fuerst  
Remedial Section  
Superfund Branch  
Waste Management Division

cc: Fuerst

BCC - Administrative Record, w/enclosure (3 copies)

1/14/88 Alice C. Fuerst du Fuerst Disk 12-11 1/13/88

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Comments on draft ground water and surface water  
operable unit feasibility study  
Custer County Site, Valona Basin

General Comment

1. To be sure none of the referenced are draft documents, only documents that are available to the public can be referenced. Draft documents are not available to the public.

Specific Comments

1. Page 1-6 - "Gulf" is Centers for Disease Control, "S" should be added to "Center." The RAMP is not discussed in the report, therefore, that abbreviation should be removed.
2. Page 1-1 last line - the ambient water quality criteria for protection of aquatic life serve excellent but the aquatic water quality criteria clarification is needed.
3. Page 1-3 last paragraph - Capital letters should be used in the title from CGLA, i.e., (a) and (b).
4. Page 1-6 paragraph 3 - further explanation is needed to explain why a Phase II PL report is not forthcoming. The following wording is suggested.  
"Phase II will not be forthcoming because the additional information has been incorporated in technical appendices and this JID's report."
5. Page 1-6, first full paragraph - further explanation of the goals is needed. The report should state that the objective of the operable unit is to meet the Superfund goals which is the first step to meeting long-term goals.
6. Page 1-6, second full paragraph - the "Additional information for FY 1987 records of decision" should also be referred to in the report as DIAIR Directive 9310.1-21.

Enclosed with comments

## Specific Comments

## CH2M HILL Response

7. Page 1-3, course of Cleanup - The third sentence is incorrect and should be rewritten as follows:  
In addition, Section 121(a) requires that remedial actions that leave any hazardous substances onsite must meet applicable or relevant and appropriate requirements.
8. Page 1-9, last paragraph - Criteria used in the detailed evaluation are also included in the Directive (DOE-DOE-21). This reference should be included.
9. Page 2-1, paragraph 4 - CH2M HILL has stated in the past that the major Tri-State district mining interest was lead and the zinc was mainly byproduct because the miners could not sell it. Therefore zinc sulfides predominate today in the clean-up areas. The USGS report states the production in 1970 was 7,000 tons of lead and 126,000 tons of zinc. Actually states the total production from Kansas was more than 2.8 million tons of zinc and only about 10 tons of lead. Both sets of data indicate that zinc was the main product. This does not match the statements previously made. CH2M HILL should consider this and make modifications as appropriate.
10. Page 2-6, paragraph 4 - Was the cadmium also left behind in the shelter slags and wastes? CH2M HILL should consider this and make modifications as appropriate.
11. Page 2-7, Table 2-6 - "Coryton" limestone is misspelled and should be corrected.
12. Page 2-7, Table 2-6 - Footnote b should document the source of annual average flow data. As a matter of information, the Kansas Water Resources Board Technical Report Number 68, "Base Flow Distribution," October 1966, presents similar information.
13. Page 2-10, paragraph 1 - The first sentence is an incomplete sentence and should be corrected.
14. Page 2-10, paragraph 7 - An explanation of what "inter-tank connections" means should be given. As written, the general reader does not understand the sentence.

### Specific comments,

17. Page 2-13, paragraph 1 - It is possible to increase the sensitivity of the stability analysis by using more data.

18. Page 2-13, paragraph 1 - In addition to discussion of the soils at the surface, this could include a discussion of the potential mobility of various soil horizons with respect to the concentration gradients, or on the basis of the water infiltration rates, etc., and 2-14.

19. Page 2-13, paragraph 2 - In the figure 2-13a, the right side of the graph seems better.

20. Page 2-13, paragraph 2 - I understand that the first part of your proposal is not yet finalized, so do not include it.

21. Page 2-13, paragraph 2 - Can you please let me know what information is included in the results in section 2-

20, 2-13, 2-14, and 2-15? - The report lists the total amount of dissolved boron in the eroded materials, i.e. there should be a list only the total amounts, as there are reasons to list the others at all? - I would suggest considering these positions and writing them up as appendices.

22. Page 2-13, paragraph 1 - In the discussion about the levels of dissolved boron, it refers to table 2-13's vs. private communication, but neglects the discussion on page 4-3, paragraph 4. - In the discussion on page 2-13 asserts that dissolved metals in mine shafts will be lower than in soils. The discussion on page 2-13 states that many metals are found in higher concentrations in adits, as opposed to shafts. The current figure, total dissolved boron, etc., can be reported separately, clarity, to help people be helpful to see what types of metal concentrations in mine shafts are like.

23. Page 2-13, paragraph 1 - The report should clarify that tributary and tributary B are the same streams. On figure 2-13, the name of tributary B should be tributary and tributary A and tributary B.

24. Page 2-13, figure 2-13 - The figure is fine, but inaccurate, i.e., figure 2-13, and should be corrected.

## Editorial Response

## Specific Comments

24. Page 2-22, -23, -26, -28, -31. Table 2-5, -7, -10, -11  
The table for corona is for total chromate, not  
chromium VI. A correction is needed.
25. Page 2-29, first full paragraph - The table for  
chromate is for total chromate as opposed to Cr(VI).  
A change is needed. Since chromium VI is the  
standard in the ASH, a discussion is needed to  
document methods of relating total chromate  
concentrations to chromium VI concentrations.
26. Page 2-29 through 2-33 - The ground water tables  
should be summarized in text instead of page by page  
reader in the text. A summary similar to that for  
the surface water should be given.
27. Page 2-30 through 2-31 - Tables 2-1 through 2-4 should be  
reduced to one page per table as was done in Table 2-2.
28. Tables 2-7 through 2-10 - The tables should include  
columns for the number of samples analyzed.
29. Page 2-34 through 2-39, Tables 2-11 through 2-17 -  
a) It is not valid to include samples with undetectable  
levels in the column "samples exceeding standard".  
b) Samples should be removed from the column  
as were quite surprised to see this, due to the disturbance.  
c) It is unnecessary to have two notations and it  
therefore they should be removed. c) Since there  
is no standard for barium, it should not be on the  
table. d) Each table should be reduced to one page.  
e) The columns for acite should be reviewed and  
corrected as necessary.
30. Page 2-40, paragraph 4 - Further information on how  
the volume of void space was determined should be  
included.
31. Page 2-40, third full paragraph - This paragraph  
states that there is essentially total capture of  
rainfall. This statement is contradicted on page  
2-42 in the first full paragraph. Page 2-42 discusses  
surface water runoff to stream. These two pages  
should not contradict.
32. Page 2-41, figure 2-9 - This figure and related  
discussions show precipitation going to the surface  
and ground water systems in total, nothing to  
evaporation. Evaporation should be mentioned.

**Specific Comments**

Line 2-111 Revision

33. Page 2-42, Line 12 - regions of soil contamination are mentioned as a source of stress. Contamination although it has not identified, does areas of soil contamination. Since no areas have been identified, soil contamination should not be mentioned as a source.

34. Page 2-42, paragraph 2 - Line 20 is "natural" or bodies are inappropriate. In the last sentence, the word should be removed.

35. Page 2-43, paragraph 3 - Line 20 is "the soils" or "the inappropriate" in the third sentence, and should be removed.

36. Page 2-43, last paragraph - the last sentence that is contained under page 2-44 should be revised as follows:

In addition, the lower metal concentrations found in some downgradient wells may result from fractures or other flow pathways existing between aquifer areas, such as wells, rivers, etc., iron found in the private supply wells, may be leached because of the contaminated leachate from the leachate area at the salt flat contamination, however, because these wells are downgradient of the lined areas, they may also be influenced by the iron derived from pyrite minerals associated with the lead and zinc mining areas.

38. Page 2-44, paragraph 2 - The first sentence should be rewritten as follows.  
"more creek, major stream draining the valley  
substrate, is influenced by continual loading primarily  
from mine drainage sources within the substrate,  
although unverified chemical sources upstream also  
to the east of the substrate in Missouri also  
contribute to the impacts on short creek."

## Specific comments

### Concern Response

33. Page 2-4A, last paragraph - this one line sentence, should be made part of the first para. Appendix surface water impacts and should be reworded as follows:

The upstream sources of metal loadings on Short Creek are mining-related as well as industrial and contribute calcium, sulfate, zinc, sodium, nickel, manganese and acidity to Short Creek.

40. Page 2-4A, Figure 2-6 - A discussion of evaporation, transpiration and evapotranspiration and their effects on the model should be added.

41. Page 2-6B, last paragraph - the phrases "industrial business" should be changed to "unregulated industrial facilities within the substate boundaries."

42. Page 2-6C, Figure 2-7 - why is Lowell considered different in the report? Lowell is considered a non-contaminated, what is the ridge at Malone? What changes are recommended?

43. Page 2-49, Figure 2-7 - the title label for the figure is contaminated. A change is needed.

44. Page 2-50 - do not refer to figures in the appendices. If a figure is referred, repeat it in the appropriate section of the report. When the report is passed produced for the general public, the appendices will not be referenced.

45. Page 2-50, last para - here should be a transition to caption word is meant by "ore." It is unclear if this is disturbed area.

46. Section 3 - the Superfund Public Health Guidelines updated in November 1987. As the result of this update, some of the values used in the report are probably no longer valid so there is a chronic exposure is not realistic. If it is considered to be transporting dust and inhaled over the date support that

47. Section 3 - some of the bases for the risk estimates are undeterm. Soils and surface wastes are often used and exposures calculated. How does adult's ingestion of the soils? Assuming the "arbitrary average" theory, probably so there is a chronic exposure is not realistic. If it is considered to be transporting dust and inhaled over the date support that

DOING THE JOB WITHIN THE BUDGET. THIS IS THE PRIMARY CHALLENGE.  
RECENTLY, KOREA HAS BEEN CALLING FOR THE LEADERSHIP OF THE  
PACIFIC ASIAN BANK - THE INSTITUTE WHICH SHOULD BE SET UP

TO HELP ASIAN COUNTRIES TO DO BETTER IN THE WORLD MARKET. THE  
LEADERSHIP OF THE PACIFIC ASIAN BANK IS A DESIRABLE GOAL.  
IT IS TIME TO SET UP THE PACIFIC ASIAN BANK.

WE ARE PROFOUNDLY  
INTERESTED IN THE SELL WHICH PREVIOUSLY REPORTEDLY  
SOME INDIVIDUALS IN THE DEPARTMENT SOLO IS AN OUTSTANDING  
TECHNICIAN IN THE FIELD OF SESRIC. HE IS  
AN EXCEPTIONAL PERSON. HE IS A FINE PERSON.

\* \* \*  
THE PAPUA NEW GUINEA GOVERNMENT HAS APPROVED  
ONLY 500000 GOLD DOLLARS FOR THE CONSTRUCTION  
OF THE 20000 SEAT STADIUM. THE 20000 SEAT STADIUM  
COULD COST UP TO 500000 GOLD DOLLARS.  
LEADS WILL BE PROVIDED  
BY THE GOVERNMENT AND THE PAPUA NEW GUINEA  
GOVERNMENT HAS AGREED TO PROVIDE 20000 GOLD  
DOLLARS FOR THE CONSTRUCTION OF THE STADIUM.  
THE PAPUA NEW GUINEA GOVERNMENT HAS AGREED TO PROVIDE  
20000 GOLD DOLLARS FOR THE CONSTRUCTION OF THE STADIUM.

\* \* \*  
THE GOVERNMENT OF PAPUA NEW GUINEA HAS AGREED  
TO PROVIDE 20000 GOLD DOLLARS FOR THE CONSTRUCTION  
OF THE STADIUM. THE PAPUA NEW GUINEA GOVERNMENT  
HAS AGREED TO PROVIDE 20000 GOLD DOLLARS FOR THE CONSTRUCTION  
OF THE STADIUM.

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TO PROVIDE 20000 GOLD DOLLARS FOR THE CONSTRUCTION  
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THE GOVERNMENT OF PAPUA NEW GUINEA HAS AGREED  
TO PROVIDE 20000 GOLD DOLLARS FOR THE CONSTRUCTION  
OF THE STADIUM. THE PAPUA NEW GUINEA GOVERNMENT  
HAS AGREED TO PROVIDE 20000 GOLD DOLLARS FOR THE CONSTRUCTION  
OF THE STADIUM.

all, many 5-6-year-olds can - The paragraph on adults  
needs to be modified to refer the reader to  
chapter 4. There is no reason to mention after  
quarantine standards, state regulations need only  
, now isolated, will generally be approved. Also, given  
water requirements are not mentioned anywhere else  
therefore, should be removed. Do not state any of  
adults well. These changes should be made.

Fig. 3-26, TABLE 3-15 - The Lander Potency for  
each given in Table 3-15, but is not used in  
the test, if it is not needed, remove it from the  
ticket. If it is not needed, remove it from the  
test, but is not used in the test, if it is not  
needed, remove it from the ticket. A correction  
is added to the result. The error in the result  
depends on the number of digits in the result.

Electronics Lecture 4

$$0.101 = \text{KTR} - 1000$$

41900 = 775 - 9836

ASPECTIC = RETROGRADE UTERUS = 1.5

PD of 3-31-92 - THE FOLLOWING CHANGES IN THE  
THE BASED SCHEDULES OF WORK AS A RESULT OF THE  
EXTRA MEETINGS WHICH OCCURRED ON THE EXPLOSIVE.

• **পোর্টেল প্রক্রিয়া** - এই প্রক্রিয়াটি সহজেই কার্ড বা মোবাইল ফোনের মাধ্যমে অনলাইনে ক্রয় করা যাবে।

51. Page 3-23, Paragraph 1 - The following observations are  
differences from Table 3-23, page 3-23, but they are  
not mentioned as a preference on pages 3-23 and 3-23  
as a source of geological information. The results  
and visitors are not in Table 3-23, so the values could not  
be found later as stated on page 3-19 (e.g., table 1).

• 131126(1)

55. Figure 3-15 - THE DEPRESSIVE ASSAULTS OF THE COLD FRONT  
BETWEEN ARE ONLY LOCAL, CONTINUOUSLY REASSURING, SINCE ALL THESE  
ARE NOT CAUSAL. THE REPORT SHOULD RECOGNIZE THAT THE  
ASSASSINATE ASSAULTS THAT FOLLOW ARE RELATED TO  
WEAK JADE FISHERIES IN THIS AREA AND NOT TO  
COLD FRONTS. THIS IS THE REPORT'S SHAME.

specificologic operations

corrections.

62. Page 3-90, Line 19 - The "outnumber" typo should be

reduced to 17%.

12. PAGE 4-3, TABLE 4-3 - THE CORROSION TEST IS FOR THE TESTS  
CATEGORICAL, NOT CHRONOGRAM AT. A CLOSING IS REQUIRED.

13. PAGE 4-3, PARAGRAPH 4 - THE CORROSION TEST IS FOR THE TESTS  
"CORROSION TESTS" THAT SHOULD BE CORRECTED.

14. PAGE 4-3, PARAGRAPH 2 - THE REPORT SHOULD NOT  
INCLUDE WATER SUPPLIES, WHICH IS A TYPE IN THE TESTS  
WELLS SHOULD EXPLAIN THAT THE WELLS ARE REPLICATED. IT  
INCLUDE WATER SUPPLIES, WHICH IS THE SECOND TEST. THIS IS  
SIMILAR TESTS FOR POLYLCIC WATER SUPPLIES.

15. PAGE 4-3, SECOND 4011 PARAGRAPH - THE INSPECTION ON  
THE CORROSION TEST IS FOR THE TESTS

16. PAGE 4-3, PARAGRAPH 2 - THE INSPECTION IS FOR THE TESTS  
NOT THE PROPOSED TESTS.

17. PAGE 5-3, PARAGRAPH 1 - THE INSPECTION IS FOR THE LAST  
TESTS PREPARATION TO THE REMOVAL OF THE TESTS.  
TESTS PREPARATION, IT DOES NOT ADD ANYTHING AND MUST  
PROVIDE CONSISTENCE OF THE WORDS "PREPARATION".  
THE SENTENCE SHOULD NOT BE USED IN THIS TESTS.

18. PAGE 5-3, PARAGRAPH 1 - THE INSPECTION IS FOR THE TESTS  
WHICH ARE PREPARED TO THE INSPECTION TESTS.  
TESTS PREPARATION, IT IS UNCLEAR IF THE TESTS  
SHOULD NOT BE USED IN THIS TESTS.

19. PAGE 5-3, PARAGRAPH 1 - THE INSPECTION IS FOR THE TESTS  
WHICH ARE PREPARED TO THE INSPECTION TESTS.  
TESTS PREPARATION, IT IS UNCLEAR IF THE TESTS  
SHOULD NOT BE USED IN THIS TESTS.

## SPECIFIC COMMENTS

## DRAFT 9/11 RESPONSE

79. Page 5-30, paragraph 1 - Is the term "cut-off to grade used, properly, here? "Cure" only applies if the material can be treated and the metals recovered to a profit. Is the paragraph referring to that or is it really saying that a "safe" contaminant level in the material would have to be established so that higher-level material would be removed and lower-level material left in place? If appropriate, make the necessary changes.
80. Page 5-30, last paragraph - The words "metallurgical processes" should be replaced with "beneficiation processes." Flotation is a beneficiation process. Smelting is a metallurgical process.
81. Page 5-30, last paragraph - Intland treatment may only be effective with very dilute slimes. This needs to be considered when evaluating this option.
82. Page 5-30, paragraph 4 - The last sentence should be reworded as follows:  
For the purpose of alternative development, an onsite KTR facility for a product disposal will be retained for alternative development.
83. Bibliography - The bibliography is incomplete. The majority of the EIS references are not included. Draft re-rents should not be cited. The corrections and additions should be made.